A MESSAGE FROM THE PRESIDENT.*

July 1919.

Because time presses, and because the traditional Address from the Chair may, I think, be more usefully devoted to matters which interest laymen than to our internal affairs, I venture to anticipate the formal Opening of our Session in November next, and to say a few words to my brother architects at this moment of National Triumph.

I WANT, first, to tell you with what diffident misgiving of my own fitness—with what sincere humility—I have accepted your call to preside over this great and famous Institute. To carry on the tradition of the immortal chiefs—Cockerell, Tite, Gilbert Scott, Street, and others—who have preceded me in this Chair, is a task far beyond my competence, unless the whole-hearted support of my fellows comes to my aid.

Reform. We of the new Council assume office at a culminating point in the world's history. Peace has just been signed; the old order changeth—nay! hath changed—and giveth place to the new. Our responsibility to our brethren, at this critical moment, is very great. There are urgent matters to decide; the profession, like the world outside it, is vocal with a vague discontent. Part of this is doubtless psychological, due to nervous impatience with the slow return to equilibrium of vast social forces displaced and shaken by the war; but there is also an instinctive, and, I believe, sound, perception of the fact that restoration to pre-war conditions will not satisfy our needs. There is a desire for closer internal union; we are asked to take steps for the consolidation of our interests, and for their effective protection; it is urged that we should secure a fuller measure of public confidence and esteem for our profession.

To these demands I believe it our clear duty to give most sympathetic attention, bearing always in mind that while our first duty is towards our own members, who have proved their quality in the ordeal of examination—and especially towards those who have served and fought for us—yet the best and highest interests of this Royal Institution are those of the State. No selfish policy, seeking private advantage at the expense of the community, can either succeed or endure.

The New Charter. The moment is opportune for reform, since in the forefront of our programme for the Session is the procedure with regard to a new Charter, which was arrested by the outbreak of war. This Charter, I may remind you—whose outlines have already received the sanction of the general body of members—provides for the establishment of a Register of qualified architects administered by a Registration Board, and for a revised Constitution of the Council.

* At the first meeting of the new Council the President, Mr. John W. Simpson, made this Address to his colleagues. By a unanimous vote of the Council it was decided that it should be published in the next number of the Royal Institute Journal.

I have refreshed my memory both as to the principles it embodies, and as to the debates which led to their settlement. It appears to me a wise and statesmanlike measure, and the Council will undertake at once the duty of drafting it with a view to its submission to the Privy Council and its definite approval by the General body. They will also consider whether other reforms in our organisation might not be incorporated in this document; with the assent, of course, of the general body.

Meanwhile, let me declare that we of the Royal Institute proffer goodwill and help to all architects, whether within or without our Incorporation. Already, as I have said, we have determined on a substantial measure of reform. To attempt to grasp at once all that some of us want, might mean the loss of much that we have; we must not divide this noble Institute by undue anxiety to satisfy a section. If we are to make of the profession a homogeneous structure, we must build from the base upward, from within outward; adding stone to stone with cautious care that each is rightly and soundly placed. The first step to unity is a Council solid as to its policy, and steadily pursuing it. I have confidence that the members will support the considered judgment of those whom they have elected to represent them; and there will be no loss of time in preparing it.

Publicity. An essential condition of unity is the interest of members in the work of their Council and Committees. We publish, it is true, a statutory annual Report, a rather formidable document, some of whose miscellaneous contents are necessarily out of date, others apt to be overlooked in the crowd of items. But some better way is needed to keep members in constant touch with their affairs; Parliament itself would be forgotten if its proceedings were not promptly reported. The JOURNAL is our permanent official record, and this, for many reasons—cost among them—can only appear at comparatively long intervals. I have received the most cordial and generous offers of help from the Press; and propose to furnish the editors with the fullest information available, as occasion arises. Some of the matters with which we have to deal are of a confidential and delicate nature, and we do not wish our members to withhold their difficulties from the Council for fear of publicity; but with the assistance of the Vice-Presidents and Secretaries I shall hope to avoid indiscretion.

The Dinner. Not unconnected with the desire for closer internal contact is the general feeling that we should return to our former practice of holding an annual public dinner. A festival of this kind is a most valuable means of bringing members of the Royal Institute into personal friendship one with another, and, incidentally, an occasion for honouring distinguished public men to whom we are indebted for advice and support. In any event, whether we dine together or prefer some other form of entertainment, we shall take the opportunity of making it our public acknowledgment and welcome to our members who have served in His Majesty's Forces.

Country Members. This personal intercourse of members is of great importance. It is asserted that the public "knows the names of twenty painters where it knows the name of one architect"; the mere fact is that we do not know each other as we should, and part of the prevailing apathy with regard to our affairs is a consequence of it. In particular, the relations between London and country architects need strengthening: their conditions vary in many ways, and sympathetic understanding comes only from mutual knowledge. It will be, I consider, my duty, as well as a pleasure, to visit all the Allied Societies—or as many as may be possible—during my term of office; not to deliver formal addresses, but to meet their members in friendly conversation, and learn their special difficulties and needs.

Official Architects. The relation of those of our members who have accepted official positions to those in private practice, also claims our attention. For the moment I need only say that, whatever exception may be taken to the system under which they work, they themselves enjoy equal consideration and honour with their brethren. They are with us and of us; it is for us to assist them in every possible way; for them to support the Royal Institute with all loyalty, and work for the common interest.

The "Journal" and "Kalendar." I have already mentioned our JOURNAL. This was, before the war, a production of considerable permanent value; its revival, and that of the *Kalendar*, is now being considered. Members receive these gratuitously; they rightly attach importance to the privilege, and while they have acquiesced in its partial withdrawal during the war, they are now naturally looking for its restoration. How far we can go towards renewing the former high standard of these publications must depend upon the funds available. The *Kalendar* could, no doubt, be much reduced in size, and still remain a valuable handbook. Every member must receive a copy of the Charter and Bye-Laws on his election, and it may be most convenient to print these in the *Kalendar;* but a great deal of permanent matter could be printed as separate pamphlets, and charged for.

Education. The Board of Architectural Education is now a powerful body, ranking as a cousin, almost as a sister, to the Council. This Board, under its gifted Chairman, Mr. Waterhouse, will, no doubt, direct its mind to the suggestions which are being made for widening the education of architects on the financial and scientific side of the profession. The mind of the student is receptive, and his frame elastic; his position nowadays reminds me of those contumacious prisoners, on whom there was ordered to be laid "so great a weight as they could bear—and more"; but his indomitable spirit will doubtless sustain the added load, and his reward will come when he enters into his kingdom of practice.

The Library. The Institute, I think, hardly appreciates as it should the wonderful Library it possesses. It is certainly not used as so great an instrument should be in connection with our educational work. As a beginning, our Librarian has promised to give us an address on the contents and the functions of such a collection, and to develop his paper later on into a guide to its treasures and their use. A special notice will be sent to students inviting them to attend this lecture.

Civic Survey. In connection with the Sessional papers, the Council has asked Mr. Newton, whose work and that of his colleagues in connection with the subject merits our hearty gratitude, to give us an account of the Civic Survey work, and the use to be made of the mass of valuable drawings and documents which have been compiled.

Finance. The subject of our Finances must have careful consideration, and two or three of the clear heads on the Council will report to us, as soon as may be, as to what income is available for expenditure, after providing for the permanent charges and outgoings; with any recommendations they may wish to attach thereto. Activity, I fear, generally connotes increased expense, and there is no doubt that our resources reflect the great privations of the profession during the war. On the other hand, an energetic policy may bring financial as well as moral support.

The question of sanctioning the formation of an Indian branch of the Royal Institute will be submitted to the Council. If such a proposal meets with approval, it will probably prove a source of increased revenue.

It is most desirable that qualified Associates and Licentiates should proceed to the Fellowship class, and I earnestly direct their attention to this matter. In the case of Licentiates I understand that some, whom we should be glad to welcome as full members, are deterred from submitting their work by a modest fear that they may be deemed unworthy, and that failure in the required examination might injure their professional position. If any of these care to send their credentials to me in confidence I shall be most happy to advise them as to their prospects of success.

Professional Conduct. It has long been in my mind that a definite Code of professional conduct would be very helpful to our younger, perhaps to all our members. Such a code, drawn up by Guadet on behalf of the Société Centrale des Architectes Français in 1895, has been adopted by every society of architects in France; and a draft on similar lines will be laid before you for approval in due course.

Street Architecture. "The advancement of Civil Architecture" is the statutory duty of this Institute, and at the instance of our late President I drafted for consideration a proposal for its direct encouragement by offering a Bronze Medal every year for the best street façade. A similar award, as you are no doubt aware, is made by the Corporation of Paris, who recognise the owner of the property premiated, as well as its designer, by an abatement of one-half of his frontage dues; both the distinction and the concession are highly appreciated. Owing to the sub-division of our civic authority into corporations and boroughs, it may not be practicable to achieve this, but I am confident that both the City and the County Council of London, no less desirous than their sister Council on the Seine of improving the beauty of their city, will be willing to co-operate with us in some similar way. Although I have spoken of London only in connection with the award, we may hope, with the aid of our Allied Societies, presently to extend the principle to the other chief cities and towns of the Empire. I commend the idea to their favourable consideration.

Peace Decorations. As a Royal Institute, it will be proper to indicate our loyal thankfulness for the conclusion of victorious Peace by suitably decorating our House on the 19th inst., and Professor Beresford Pite has been good enough to undertake the design and execution of the work.

Building Conditions. The condition of the building industry touches the profession closely. Hostilities were suspended eight months ago, Peace is now concluded, and the trade remains paralysed. It is imperative that life and motion be restored without delay, and it is for us to take a leading part in that restoration. We have already, as you know, set up a Building Industries Consultative Board, composed of builders, surveyors, operatives, and architects, of which your President is Chairman, and Mr. Lloyd, of the National Federation of Building Operatives, Vice-Chairman. The single interest of architects and surveyors is to get the machinery of building into active operation; they are quite disinterested as regards the special views of either employers or employed. By bringing together all four classes of workers we hoped to create a body—less formal and more elastic than the official Whitley Council, but in touch with it—where professional men who have the confidence of the two executive groups, might join hands with both. That this confidence exists was shown by the unanimous choice of the chairman; and the first meetings have produced wholesome and open discussions of great promise. I hope that your delegates may soon be able to report progress to the Council, and have the benefit of their direction as to future initiative.

Housing. As regards the special work of Housing, the needs of the State will certainly be given precedence of all private demands; the latter will, therefore, be satisfied only at enormous cost, unless we can succeed in re-establishing a proper economic proportion between wages and production. The Architect may be certain that the amount of work which lies before him, in connection with housing, is prodigious. We are as yet only on the fringe of the problem; and members of the profession owe more than they perhaps realise to my predecessor, Mr. Hare, for his persistent efforts to secure proper recognition for them by the Government. The policy of the Royal Institute is directed to procuring for the State Housing Scheme the maximum output of building in the shortest possible time; and to securing the employment of all qualified architects who have served in His Majesty's forces, by a wide distribution of the work of design and superintendence. A Central Consultative Board has been formed, and is already at work, with a view to assisting County and Local Authorities by their advice both in the selection of architects, and in the preparation and execution of their schemes. It is hoped that the Ministry of Health may officially endorse the Royal Institute scale of charges, and accept our proposals for carrying out the larger schemes by groups of executants, each group being under the general direction of a superintending architect. The Board is also considering the means of entrusting a limited amount of responsibility in connection with such groups to specially trained students.

International Amity.

The great importance of preserving the friendly relations which exist between the Royal Institute and our brethren abroad has not been forgotten. We realise that we may possibly be called upon to combine in one of the greatest building schemes in history, and I have been authorised to send in your name a telegram of greeting and congratulation, on the occasion of our first Council meeting after Peace has been signed, to the Societies of France, to the American Institute, and to our Allied Societies across the Seas.

The foregoing outline by no means exhausts the subjects which will, I hope, occupy our attention during the forthcoming Session. The formation of a parliamentary group, whose vigilance should guard our beloved art when legislative proposals might affect it, has already the sympathetic approval of Major Barnes, M.P. The Royal Institute may be privileged to take the initiative in an even wider-reaching scheme, for mutual assistance and protection in the uncertain times before us. But I have said enough to show that we have a session of full and strenuous work before us. You will supplement my modest and somewhat commonplace programme by your own suggestions.

Procedure.

A word on procedure before I conclude. The Council has accepted a proposal to reduce its Committees to a minimum ; we do not want to squander the time of busy men on any but strictly necessary meetings, and we have been too much in the habit of referring troublesome matters to special committees, instead of dealing with them directly, and at once. On the other hand, we propose to strengthen our great Standing Committees, and give them more real responsibility than heretofore. To this end we have, in exercising our power of appointing additional members to them, placed on each a Vice-President who will represent his own Standing Committee on the Council and support its proposals and reports. The position of Vice-President is one of high distinction and should be fully recognised. The four gentlemen who hold that office take a leading part in the work of the Institute, and there is a corresponding call upon their time. I must rely much upon them for support ; as Aaron and Hur held up the fainting hands of their chief, so it is for them to prevent the weakness of their President from becoming too apparent.

"R.I.B.A."

This Royal Institute of British Architects to which we belong is a splendid and a famous organisation. It governs practically all properly qualified architects throughout the Empire ; there is no other architectural society in the world which approaches it in scope and completeness ; it is the envy and admiration of our foreign brethren. Every member may be proud of his allegiance to the Royal Institute ; and the measure of his own enthusiasm will be found in the common animation it inspires. That there should be criticism of the Council is right and proper ; " a reasonable amount of fleas," said the American humorist, " is good for a dog ; keeps him from worrying 'bout being a dog ! " But let lookers-on remember that they have freely elected the team which is playing for them ; clap their hands for its successes, sympathise in its failures, and encourage it to try again.

For the Council itself stands the great device : *Fais que dois, advienne que pourra !*

WAR FACTORIES AND SHEDS—THEIR CONSTRUCTION AND ADAPTATION TO FUTURE NEEDS.

An abstract of a Paper read before the Royal Institute of British Architects, on 17th March, 1919, by Sir Frank Baines, C.B.E., M.V.O.

In the limited time at my disposal this evening I can hope to touch only upon a selection of the special war buildings which it was my privilege to carry into execution during the period of crisis from which we are now happily emerging.

The want of national preparedness, which has been frequently emphasised, necessitated the execution of immense building projects in circumstances of unexampled difficulty. What has been described as the British genius for improvisation laboured at this period under necessities of the most desperate order, triumphing, it is true, in the end; but being subjected on all hands during the process to a strain of exceptional severity. Mammoth factories, on sites far removed from sources of labour and materials, had to arise, apparently at a wave of the magician's wand. Sites had to be selected, frequently in the most unpromising situations, and buildings to be erected upon land presenting exceptional natural difficulties—the whole complicated, elaborate, and highly technical problem of factory process and factory allocation, plant disposition and power distribution, railway sidings, fire-retardant services, water supply, sewage disposal, electric lighting, heating, ventilation, refrigeration—all had to be grasped, studied and carried into execution at fever-heat; and, while the problems and difficulties which were encountered look less formidable in retrospect, being surmounted, and were all such as would yield in normal times to routine procedure with which you are all familiar, it may perhaps be no idle enterprise to describe the problems of public service as they arose and the methods adopted for their solution.

Professor Lethaby, who always finds the apposite thing to say, remarked in this room on the occasion of one of his illuminating addresses that the architect and the engineer were clearly called to the reform of one another. It is, I think, abundantly foreshadowed that the closest association and co-operation between these professions will be necessary in the future; and this interdependence is well exemplified in the buildings which I am proposing to introduce to your notice this evening. In the design of modern industrial buildings the contexture of architecture and engineering is closely interwoven, and I take leave to question, with all respect, whether it would have been possible without immense reduction of efficiency and loss of time—which was vital to a nation fighting for very existence—to design these war factories, except in a large departmental office, having on the premises highly-trained practitioners of both professions in the most intimate and constant association.

It should be borne in mind that the work was generally of a highly confidential character, the processes involved were frequently secret, experimental and excessively dangerous; and the prevailing conditions of the period during which the work was undertaken necessitated bold and quick decisions, vigorous prosecution, and the overthrow of established routine. The organisation and responsibility normally delegated to the contractor had to be shouldered, complex interdepartmental negotiations to be conducted, bulk materials to be sought for unceasingly, production stimulated, railway traffic to be promoted, miles of sidings to be laid down, and rolling stock to be diverted, routed and purchased. Labour had to be allocated, recruited, conciliated, fed, housed—and withal, the public purse had to be safeguarded. Contracts of all kinds were entered into: and in this connection I may mention that my division of His Majesty's Office of Works achieved a distinction during a period of abnormal conditions in negotiating 350 competitive lump-sum contracts, aggregating to many millions sterling; and 120 competitive schedule contracts amounting to many millions more.

Classification of Factories and Sheds.

A rough classification of the principal types of factory and shed will illustrate the more important processes and applications involved. Factories were erected for production and purification of the constituents of high explosive, for shell filling, bomb filling, fuse filling, submarine mine filling, gas filling, for the storage of empty shell, filled shell and gun ammunition generally; for box making and repairing, and for salvage; for aircraft and motor assembly; for grain storage, aeroplane testing, rifle testing, timber drying, map printing, and a hundred other industries which arose from the exigencies of war.

The construction, too, was subject to infinite variety—permanent, semi-permanent, and temporary, built with brick, hollow clay-block, concrete slab, steel and timber. One condition alone may be said to have been constant—the desperate necessity for speed.

Ammonium Nitrate Factory.—The first aggregation of buildings to be described was an immense factory for the production of ammonium nitrate, a constituent in the manufacture of high explosive.

The site was about 77 acres in extent and well situate on railway connection with related factories, in a district in which labour for working the factory was readily available.

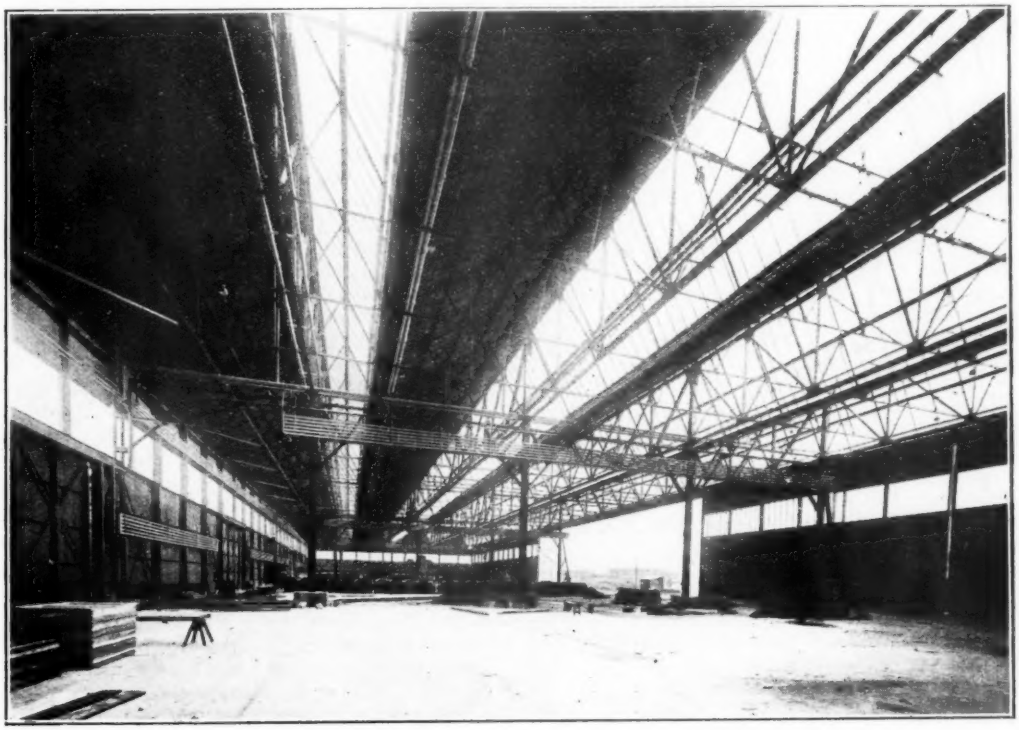
From a branch railway two connections were made to link up the factory railway system. All the main process buildings are served by this railway, and there is a total length of track, including the marshalling sidings, of 5½ miles.

The general lay-out of the buildings was planned with a view to rapid production and the saving of labour in handling materials.

The construction was of a permanent character, the walls being built of Fletton bricks with stock brick external facings, and timber and steel framed roofs, covered with boarding and slating.

In the design an endeavour was made to achieve a certain degree of architectural character.

A 30-feet road was constructed from the public thoroughfare to a rectangular courtyard, bounded on the east by the administrative offices and on the west by the canteen; a time office and garage being arranged on the northern side, adjacent to the main factory entrance, with a cycle shed on the south. The roadway was continued inside the factory entrance practically due north, and on the east of this roadway, almost centrally on the site, were placed three units, comprising the crystalliser and evaporator houses, with two mixer houses and a filter house in one continuous block common to the three units.



At the north end of the site the sodium nitrate store was erected in an isolated position, owing to the inflammable nature of the material, and especially of the bags in which the nitrate is brought into the factory. Adjacent to the sodium nitrate store the bag-washing and clean bag store were built, for washing and storing bags in which nitrate is delivered.

On the eastern boundary of the site, adjacent to the process buildings, the store for ammonium sulphate was erected. It will be seen that the sodium nitrate store and the ammonium sulphate store, which contain the two raw products for the manufacture of ammonium nitrate, were both situate in a position convenient to the flow of the incoming traffic. On the south-west side of the process blocks a store was built for the finished product, ammonium nitrate: the waste product, sodium sulphate, being conveyed by means of an aerial ropeway to a dumping ground at the southern extremity of the site.

It will thus be seen that the process operations determined the general lay-out of the buildings.

The three stores were similar in construction, each was roofed in two spans of 52 feet, the span supports in the centre, under the trusses, being brick piers. These stores were lined on the inside with blue bricks to a height at which the material was intended to be stacked, this being necessitated by the action of acid contained in the materials.

In the sodium nitrate store upper gangways were formed of reinforced concrete beams and platforms, the material at this store being elevated, distributed by means of barrels, and tipped from the high-level platform.

The roof trusses were composite construction, carrying purlins at about 4 feet centres, boarding being laid direct on to the purlins, and slating upon the boarding. Ample daylighting was provided by both roof and sidelights. The floors, formed of a 6-inch thickness of

concrete on a layer of hardcore, were surfaced with blue Staffordshire tiles laid to falls, channels being provided to collect liquor draining from the stacked material.

The mixer houses were similarly constructed, the span being about 36 feet. Top lighting and open ridge ventilation were provided. The roof trusses were covered with a solution of ammonium sulphate, both as a fire retardant and to prevent impermeation by ammonium nitrate and later were covered with thin metal sheeting, as it was found that flame ascended from the mixer vessels. The best type of roof construction for practically the whole of this factory would undoubtedly have been steel framing, but at the time the factory was commenced the supply of steel was extremely limited, and instructions were issued that timber should be employed wherever practicable. The filter house was of similar construction to the mixer houses, the roof trusses being designed to carry in addition a hand crane capable of lifting 5 tons. The three main blocks were roofed by means of trusses having a span of 52 feet at 16 feet centres, with purlins at 4 feet centres, bearing on the principals, boarding being nailed direct to the purlins, with an external covering of slates. The roof trusses were supported on timber posts, the height from the floor to the underside of the tie-beam being 30 feet. A crane was inserted in the bay through which the railway track passes, no engines being allowed within the building. Roof and side lighting were adopted, and continuous open ridge ventilators. The floor was composed of a 4-inch thickness of hardcore and 4 inches of concrete, covered with 1½ inch blue Staffordshire tiles, the gutters between the roofs being formed of asphalte, reinforced with expanded metal. Steam for power and heating was supplied by means of 20 Lancashire boilers, having a total capacity of 134,000 to 140,000 lb. of steam per hour. Two brick chimney-shafts were erected to a height of 180 feet from the top of footings, the internal diameter being about 10 feet. The boiler house was covered with a steel bow-shaped roof with a cantilever roof over the coal pits. Coal is taken from the pits by bucket elevators, being tipped into the pits direct from the trucks. As the sub-soil was clay, special precautions were necessitated in order to prevent the drying and consequent shrinkage of the sub-foundation under the flues; this was accomplished by means of hollow terra-cotta blocks, which were laid in such a manner over the concrete raft foundation that the cavities, connected with inlet and outlet flues, formed ducts, a constant current of air being thus maintained. Over these hollow blocks a layer of sand 3 inches thick was laid on which 3-inch fireclay slabs were bedded. The boiler feed was connected with the fire-main supply, which was installed with a catch-pit and pumping house by the side of the canal, distant about a mile from the site.

The main pumping plant for the whole of the system consists of 9 vacuum engines, steam driven and water cooled. These were erected in a building just north of the boiler house, which also contained a workshop and stores. Two cooling towers were erected north of the stores. An important point in the arrangement of the plant was the duplication of all principal pipe-lines, which was necessitated owing to the liquor deposit choking the pipes: by this duplication overhauling was facilitated and continuity of output ensured.

National Filling Factories.—The national filling factories were erected for the purpose of filling shells, cartridge cases, detonators, primers, fuses, tee tubes and other small shell components.

Sites.—The selection of sites was governed principally by:—

1. Isolation from population centres.
2. Ample main line railway service in communication with:—
   (*a*) Projectile, high explosive and purification factories.
   (*b*) Export ports.
3. General levels of ground.
4. Other general conditions usually associated with large undertakings, such as sewage disposal, water supply, proximity to main roads, etc.

Lay-out.—Large site areas were required in comparison with actual working floor areas, on account of the necessity for isolating danger buildings, magazines, etc. The minimum distance, for instance, for unrevetted magazine being 100 yards from the nearest building, so that for a large number of magazines, whether revetted or unrevetted, a huge area would be required.

Time of Erection.—Time was always the essence of the contract. In some cases the buildings were filling within five to six weeks from commencement of erection.

Labour.—At the time very little organisation existed for the transfer of men in large bodies from one part of the country to another. The Munitions Labour Regulations were not fully known or in complete working order. Strikes were frequent, and in cases where sufficient men were unobtainable, military labour was utilised, the working parties consisting of low category men, very few of whom had ever done similar work before.

Types of Buildings.—Buildings associated with filling factories can roughly be divided into danger and non-danger buildings. The former include magazines and working rooms, and the latter administrative buildings, messrooms, power houses, etc.

An important feature of all the factories were the change rooms, where the workers change their ordinary apparel for working clothes and are deprived of matches and smoking materials, and in some cases of keys, knives and other metalwork likely to cause a spark. At a point in these change rooms is a barrier where the workers change their shoes before going on to the clean platforms which connect all danger and working buildings.

In the case of isolated danger buildings where it

would have been too expensive to run special cleanways, small cubicles were constructed at the entrance, in which workers change their shoes before entering the building.

Railway Facilities.—Connection was made with the main line and sorting sidings, and a broad gauge railway laid down wherever possible to facilitate handling of the traffic; a loop or complete circle of broad gauge railway was included.

Truckage Systems.—These were laid directly on to the ground and in cuttings or embankments or on elevated platforms, constructed either entirely of wood or of timber on concrete or brick piers.

In danger buildings and working areas the rails were almost invariably of gunmetal or hard wood, and no considerable gradients were admissible in such sections because of the danger attending runaway trucks containing explosives.

Sewage Disposal.—Sewage disposal plant was necessary at most of the National Filling Factories. In a few cases only was it possible to connect to existing drains of local authorities.

Water Supply was obtained (1) from local authority; (2) From wells bored on the site, or upon adjoining sites.

Lighting and Power.—Was obtained: (1) From local authorities, which very often involved a long and expensive cable; (2) From independent plant at factory.

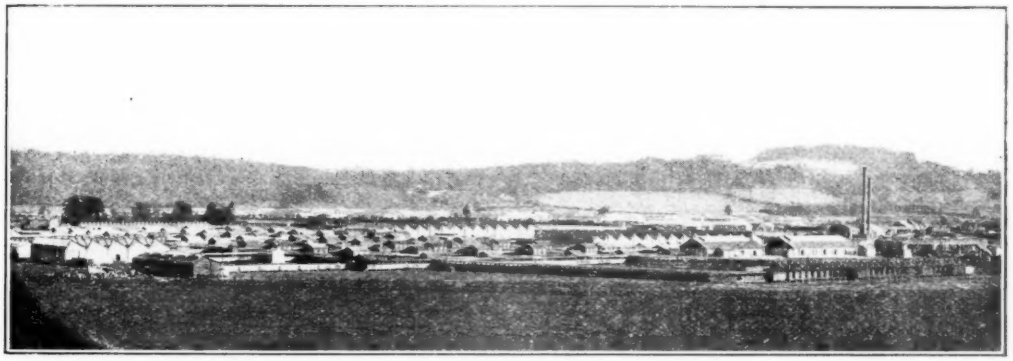
Special Finishings to Buildings.—In buildings handling fulminate of mercury and other high explosive it was found advisable to cover the walls and ceilings with white enamelled cloth, which would retain no dust and could be easily washed; while where the use of paint or varnish was necessitated, it was essential that the material should contain not more than 3 per cent. of lead, no lead or zinc base paints or lime washes being admissible in picric acid sections.

In some factories, especially in picric acid sections, gunmetal fittings were used throughout. Linoleum or cork carpet was laid on the floors of workrooms and corridors and coved skirtings were adopted. The asphalte for floors was of a special gritless composition, particularly in amatol factories, where special precautions were necessary.

Fire-Fighting Resources.—Special factory fire brigades and patrols were formed, and each room equipped with water and sand buckets and extincteurs; in some cases it was necessary to provide considerable storage of water, for which purpose reservoirs were constructed, a disused quarry being lined and utilised in one instance.

A National Filling Factory.—The site of the factory next described is approximately 1,200 acres in extent, a factor in the selection being the presence of large beds of gravel requisite for the work of construction.

The factory as a whole consists of three distinct sections, namely: the amatol factory, which comprises seven units, on the south side; the picric acid (lyddite) factory on the north side; and the expense



A.O.D. stores on the north-east side of the site; with reserve A.O.D. five miles away. Administrative offices, messrooms, boiler houses and workshops are situate on the main factory road, which intersects the site and separates the amatol and picric sections.

The workpeople are conveyed to the site by a special service of trains, a station being built on the site between the two sections of the factory.

In connection with this factory another depot, devoted to A.O.D. storage purposes, was constructed about six miles distant. This depot covers an area of 300 acres, with a length of railway about seven miles.

Dealing with the various sections of the factory in detail:—

The Amatol Section.—A special feature of this site, which is approximately a mile and a half in length by three-quarters of a mile in depth, is that the fall of the ground was only about three feet in both directions, the main cleanway through all amatol units being 1⅛ miles long.

The section consists of seven distinct units, ranging from west to east, the first unit on the west side, and the remaining six being coupled up in pairs.

This section of the factory is entered from the south off existing main road.

The main entrance block comprises labour exchange, time office, cycle stores, lavatories, police and fire offices, etc.

The workpeople, after depositing all articles of contraband at the main entrance, pass through turnstiles to the time office, where they are "clocked in," and thence proceed to the changing rooms, where they assume their factory clothing.

All the process buildings of the seven units are approached through the change rooms to the two main cleanways, which are covered in, one on the north side of the press house, and one on the north side of the amatol shell store, with various connecting cleanways from these two main thoroughfares.

Off the cleanways are lavatories, ambulance rooms and small buildings for the use of the foremen and inspection officers. The six units, which are coupled in pairs for H.E. feed, are all trucked on the continual process.

The process is briefly as follows :—

Trucks containing H.E. ingredients—T.N.T. and ammonium nitrate—are shunted from the main line sidings to expense stores and reserve stores on the south side of the amatol factory, and ammonium nitrate is delivered to the four stores between the empty shell stores.

The ammonium nitrate is stored in bulk in the ammonium nitrate store, between the amatol shell stores, in bins having walls formed of blue brick. Ammonium nitrate is conveyed from these stores on trolleys into the dryer and crusher houses.

Each of these houses is approximately 62 feet by 28 feet and double storeyed. Ammonium nitrate is placed on hot plates where it is broken down, and thence is tipped into a large hopper, whence it is conveyed by a bucket-elevator up a shaft into a large cylindrical rotary dryer. From the rotary dryer the ammonium nitrate is taken up to the first floor through the heater, and from the heater the material passes through a magnetic separator, which abstracts all metallic particles. From the separator the material discharges into an automatic weigher. Automatically weighed charges of dried ammonium nitrate are then conveyed to the incorporating house, where they are mixed with trinitrotoluene.

The T.N.T. is brought from small stores situate between the transit houses. Outside these stores, in a portion of the cleanway which is enlarged, the T.N.T. is automatically weighed and brought along the cleanway running south towards the incorporating house, being deposited side by side with the dried ammonium nitrate. These two materials are then placed into the hooded rotary incorporating mills in the proportions of 80 per cent. of ammonium nitrate to 20 per cent. of T.N.T. The mixture is ground for about twenty minutes, after which it is conveyed to the end of the press houses east and west of each incorporating house. It will be seen therefore that each ammonium nitrate expense dryer, T.N.T. expense crusher, and incorporating house serves two press houses.

The material is deposited at the end of the press houses preparatory to being filled into empty shells. The empty shell stores are each 351 feet by 121 feet, under one span, and 12 feet high to the under side of the roof trusses. Each store is designed with north light trusses, spanning the shorter transverse direction of the building, namely 120 feet. Thus the whole area of the empty shell store is roofed without any intermediate stanchions. Large spans are greatly to be preferred to spans requiring intermediate supports. The amount of steel used in such a construction is not appreciably greater than with smaller spans and intermediate stanchions. The walls to these stores are composed of 4-inch hollow terra-cotta blocks, limewhited internally and rendered externally in cement. The floors are of 8-inch concrete on gravel filling.

Railway access is provided at the south end of each store, so that the empty shells can be unloaded under cover. The general floor level of the stores is about two feet below the level of the trucks.

The shells are unloaded from the trucks by gravitation, sloping boards being laid between the floor of the truck and the floor of the shed, and are piled at the foot of the slope in stacks, arranged back to back. Shells are handled from these stacks by means of overhead runways, of which sixteen are provided in each store, the system converging into eight in the centre.

When the shells are picked up from the stacks they are then conveyed to the painting tables in the centre of the buildings. Here the shells are examined, cleaned, painted, marked with the factory number, and dried by hot-air ovens. After passing over the painting tables, where they are rolled along, they are again picked up by the runways and deposited in stacks similar to those at the southern end. From the stacks they are taken over the barrier which marks the division between the clean and the dirty ways. Here the shells are again examined, partly filled and rammed, and the exploder cases placed in the nose of the shell, after which they are trollied to the press houses for filling.

The shells enter the press houses by connecting cleanways at that end where the amatol enters from the incorporating houses. The press houses are each about 360 feet by 60 feet wide, and 11 feet high.

Amatol, from the incorporating houses, is conveyed up a platform between the extrudo chambers. From this platform the amatol is deposited through shutes to the extrudo machines. The shells are conveyed by trolley direct into the first set of extrudo chambers, where the shell is roughly filled with the amatol mixture. The shell is then conveyed on to the second set of extrudo chambers, where the amatol is further pressed by means of screw filling. The shell is then conveyed on to the press chambers, where the amatol

is packed into the shell at a pressure of 100 tons per square inch. The shell is passed through two such presses, from whence it is conveyed to the benches at the north end of the press houses. At these benches each shell is sealed by T.N.T., heated at the oven which is in the centre of the northern end of the press house, after which the exploders are inserted into the case, and the shell then passes out into the transit house.

The press house is constructed with concrete floors covered with asphalte, brick walls, steel trusses at the north and southern ends in a single span in the centre portion of the press house where the heavy press units occur. The roof is formed of hollow terra-cotta blocks covered with asphalte. The extrudo chambers were built of brickwork 18 inches thick with cement walls, a certain amount of danger being involved in the process of filling the shells at this point. The heavy press units in the centre, where the shells are pressed at 100 tons per square inch, form, perhaps, the most dangerous part of the process in the whole of this section. Accordingly, special methods were adopted to minimise the risk, and for this purpose a circular chamber, reinforced to withstand a pressure of 80 lb. per square inch was constructed. The hydraulic presses in each chamber were sunk below the floor level, and the whole of the chamber, under the presses and up to the height of the roof, was reinforced.

Over each of the chambers a very light glazed roof was constructed, but not tied down to the walls of the chamber, so that should an explosion occur a minimum of resistance would be offered by the roof. Very strong doors, operated by special hydraulic gear, were provided at the entrance and exit end of each press house.

The last of the main process buildings in the factory are the transit sheds. These are of similar construction to the empty shell stores, consisting of steel north-light trusses in a single span, and hollow-block walls, limewhited internally and plastered externally, a main gauge siding serving the north end of the building. Shells are brought into the transit sheds from the press houses, where they are deposited at the southern extremity on end and weighed, after which they are taken over the barrier by overhead runways and again marked, checked, and stacked, or taken direct on to the grummitting tables. After the shells are grummitted, they are taken up the sloping ramp, loaded into main gauge trucks and taken to the A.O.D. stores or other destination. Between the first and second units and the fifth and sixth units are sling stores; in these the grummits are stacked and distributed to the transit sheds as required. Between the third and fourth units is a small building designated "Components"; in this building are stored the exploder cases, plugs and all other composite parts, which are distributed to the southern end of the press houses.

Between the third and fourth and fifth and sixth empty shell stores are bonds and the accumulator for supplying hydraulic pressure to the press houses.

Separate systems of drainage were adopted, one of the difficulties in dealing with the drainage on the amatol site being to find an efficient filter for abstracting T.N.T. from the washings from the lavatories and laundry, which clogs the percolating filters in a sewage disposal scheme. Efficient filters were finally constructed of small acetylene tanks, from which water was filtered, first through coke-breeze and then sand; the T.N.T. which collected on the acetylene tanks being then collected, and the coke-breeze and sand forming the filter being frequently renewed.

Picric Section.—The picric acid is shunted in trucks from the main line to the picric acid bondage stores and picric acid expense stores, thence along cleanways to the unheading houses, where the boxes are opened and the loose picric acid is conveyed to the sifting houses, from thence to the melt houses, and, when melted, to filling houses, where the shells are filled and conveyed to the transit houses, in which they are examined and the exploders inserted. After which they are taken away to the A.O.D. stores.

The empty shell stores and transit houses are constructed exactly as those already described for the amatol section.

The picric acid stores and picric acid bondage stores consist of a row of 16 and 24 separate compartments, respectively 16 feet by 10 feet, and 9 feet by 8 feet, divided by 9-inch brick walls, which project 2 feet 3 inches beyond the outer walls each way, and are taken up to the roof for fire protection.

The floors are of gritless asphalte on concrete and brick filling, the outer walls being of wood framing, weather-boarded on the outside and lined inside, with a door placed centrally leading to the platform and thence to cleanways, with ventilating fanlights over the doors and ventilators in the roof.

The roof is of boarding covered with corrugated iron, and is continued over the external platform.

The smaller houses—namely, the unheading, sifting, melt and filling houses—are constructed of wood framing, weather-boarded outside, on brick foundations, with a corrugated-iron roof, lined inside with asbestos-cement sheeting. All are well lighted and ventilated by casement windows and roof ventilators to each compartment.

Artificial electric lighting is effected from the outside, the lamp being protected by a fireproof outer case of glass.

The construction indicated applies throughout to the whole of the stores, ambulance, laundry, and other buildings, the wood boarding outside being solignumed and the doors and windows painted.

Changing Rooms.—Changing rooms are constructed as at the amatol section, namely, timber truss construction on 1 foot 10½ inch by 13½ inch brick piers, with hollow-slab filling; wood floors on sleeper walls; slated and boarded roofs, long louvre ventilators at the ridge; roof glazing and casement windows, top

hung; the centre portion of the building acting as a kitchen and servery furnished with hot cupboards and sinks in counter. The two main portions of the building at the ends are equipped with tables and chairs.

Boiler House.—The boiler house accommodates 10 boilers 30 feet long and 9 feet diameter, and is built of 13½ inch and 9 inch brick walls with steel stanchions at 12 foot 6 inch centres; segmental steel roof of corrugated iron, having iron windows in each bay, with centre swing casements.

Cleanways.—All the cleanways to the picric section are constructed of wood framing on 9 inch brick foundation walls, open from sill to roof, with corrugated iron sheeting placed vertically on the outside of framing below sill level, and with segmental corrugated-iron roof.

The floor is of 7 by 2 wood, open-jointed for ventilation.

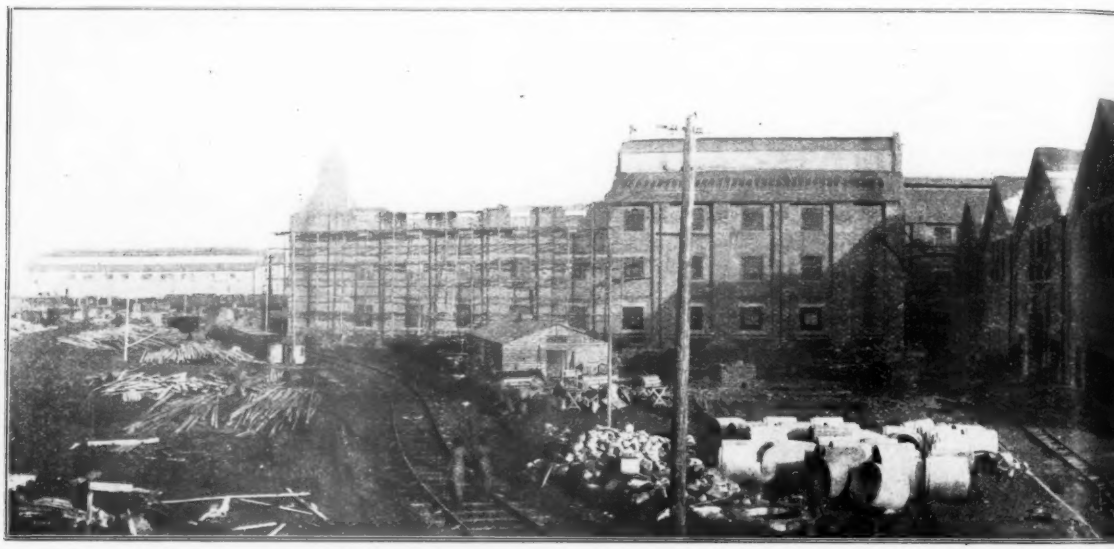
The amatol cleanways are all covered in. The main cleanways are 15 feet, 8 feet and 6 feet wide respectively, constructed of rough wood framing, weather boarded; the roof of segmental corrugated iron, the window casements top hung.

The intersecting parts of the cleanways and portions at intervals between are of fireproof construction and provided with fire-escape staircases.

80 Fuse Factory.—This factory was erected for the purpose of 80 fuse filling and assembling, on a site adjacent to an existing engineering works, as an addition to a factory then being erected for the filling of the 100 fuse, both of these fuses being made by the engineering firm, thus obviating an immense amount of handling and carriage.

The filling shops consist of four units of buildings, four buildings in each unit 222 feet long and 50 feet wide and 13 feet high from floor to eaves level, constructed with north-light roofs. The buildings of each unit were connected with a corridor 20 feet wide, the buildings being divided into eight shops of 100 feet by 50 feet to each unit, the united works being connected by clean platforms and approached only through a changing room, fitted for 8,000 workers, with a clean and a dirty side. The workers here change their ordinary outside wear to the special boots and overalls worn in the factory.

Various subsidiary buildings, powder passages, etc., were approached from the clean platform, and consisted of offices, general store, men's and women's lavatories, small magazines, mixing and drumming shops, testing rooms, bond stores and packing rooms. All the small magazines were surrounded by revetments constructed of timber filled in with earth up to an average height of 15 feet.



The main magazines were sunk and covered on top with 5 feet of soil, being ventilated by means of brick ducts to the open air.

The main shops were constructed on four different systems, in order to spread the work over as many trades as possible; one range of shops being constructed with brick walls and piers rendered externally in cement. The second range is constructed with a brick base to the floor level and hollow terra-cotta block walling above in two thicknesses, between brick piers, the whole being rendered externally. A third range is formed of breeze concrete slabs between brick piers, rendered externally in cement, and plastered internally in hard plaster. The fourth and

last range of main shops is constructed with brick base and walls of timber-framing covered externally with weather boarding and felted and lined internally with asbestos-cement sheets. The whole of the roof trusses are of timber, the roofs being in two spans of 25 feet and slated externally and lined internally with asbestos-cement sheets. The north lights are glazed with patent glazing, and extend the whole length of the shops in every case.

The floors of the shops are constructed with wood joists, carried on brick piers, with timber binders, specially strengthened where necessary to carry heavy machinery.

The trolley tracks are carried through the main passages, with turntables and tracks leading into each shop, the rails being formed of teak battens flush with the floors. The main trolley tracks on the clean platforms are of iron.

The bond stores were built with floors capable of carrying a load of 15 cwt. per square foot, and are similar to the main shops in construction.

All the subsidiary buildings are constructed with brick piers and timber framed and weather boarded structures. The mixing and drumming shops are of brick, and the roofs of magazines of reinforced concrete.

The main magazines are of brick with reinforced concrete arched roofs, the whole covered with asphalte inside and out.

The clean platforms are formed of brick piers and timber framing, and covered in on top only with curved corrugated sheeting.

The shops are designed so that the filling and assembling follow on, and the whole of the operations are completed by the passage through one unit of shops, from which the assembled fuses are conveyed on trolleys to the packing rooms and bond stores.

Detonator Sections.—These buildings, which are of a very special type, were constructed for a highly dangerous operation, the filling of petrol pellets to detonators. The site is immediately adjacent to the 80 fuse filling factory.

The detonator buildings are of brick, of solid construction and revetted all round; consisting of fulminate drying rooms, press rooms, rumbling and detonator magazines, and detonator drying rooms, together with varnishing and inspection rooms, and fulminate working rooms. The windows are placed immediately under the eaves, and the roofs are of the lightest possible construction in order to localise the damage as much as possible in the event of an explosion.

Several of the buildings are divided into compartments where not more than two persons work at a time.

Bond stores of brick construction of a capacity requisite for the factory are erected in conjunction, and main magazines, similar in construction to the 80-fuse factory magazines, are provided.

All the buildings and magazines are approached by means of clean platforms and railway sidings, and platforms adjoin the bond stores.

Ammunition Stores.—When the National Munitions Factories were properly started, it was found that their productions were so huge that whenever there was any dislocation of traffic the output could not be cleared, and the accumulation of ammunition at the factory became serious in the course of a few

days. Great danger attended the storing of considerable quantities of ammunition in a factory, as the risk of explosion was thereby increased. It was therefore decided to construct large ammunition storage depots at various points on the route from the factory to the port of embarkation, so that in the event of any dislocation of traffic, such, for example, as the blocking of the Channel by submarine activities, ammunition could be stored until required in the fighting area.

These depots were also required for storing ammunition when the factories were producing in excess of the rate of consumption at the Front, and they thus formed a reserve of shells and ammunition ready for any offensive.

One such depot, for example, occupies a site of about 1,000 acres, and consists of 65 large storage buildings and 35 miles of standard gauge railway.

As the depot was intended for post-war use, the buildings were constructed in a permanent manner with brick walls and concrete floors. Owing to the shortage of bricks, in the latter portion of the work the concrete blocks made by prisoner of war labour were utilised.

The buildings are each about half an acre in area and of one storey, being placed at safe distances apart of about 200 yards.

North-light roofing was adopted: and owing to the shortage of steel it was found necessary to construct the roofs of timber and steel.

A power house was erected for the supply of electrical power for the whole site, together with miscellaneous buildings, such as locomotive sheds, etc.

Camps were erected to accommodate the personnel of the Army Ordnance Corps, who took over the sections of the depot as these were completed.

An Aircraft Shed.—The erection of this shed for the purpose of assembling planes was necessitated by the large extension of the aircraft industry.

The building is 600 feet by 420 feet, and north-lighting was adopted in order that the planes should not be in any way affected by strong rays of sunlight. The shed was so designed that the planes could be wheeled out ready for immediate flying.

In order that the full area of the shed could be utilised as economically as possible internal stanchions were eliminated and the shed was planned with fifteen longitudinal and four transverse bays, making the clear sizes of each bay 105 feet by 40 feet. At the time the shed was erected it was thought that 105 feet would be sufficient clearance for the largest plane likely to be built, permitting a plane with 120 feet spread over the wings to be manipulated by wheeling out sideways.

The shed was divided by a 13½ inch brick wall, the northern half being raised 2 feet 6 inches above the southern half, owing to the fall of the site.

The area of the shed is approximately six acres, and the number of intermediate stanchions for supporting the roof only 42.

The steelwork was designed with 105 feet span lattice girders incorporating the north-light outline. These main girders were 40 feet apart, and were spanned between by 40 feet span ridge girders. Over the ridge girders were placed intermediate north-light trusses at 10 feet centres. The stanchions at the walls were kept free, and these stanchions were braced in two bays only.

Wind bracing to roof was inserted at the ends of the building.

The whole of the roof was covered with boarding nailed to wood purlins fastened to the backs of the intermediate trusses and main girders. The boarding was covered with slating, and the gutters were formed of asphalte reinforced with expanded metal laid on felt. It is worth noting that in the immense run of asphalte gutters, each of which is 600 feet long, no indication of leakage has yet appeared, in spite of the fact that there must be a certain amount of expansion and contraction in such an area of steelwork.

The steelwork has been designed for a safe load of nine tons per square inch in tension and eight tons in compression.

The whole of the floor of the shed was covered with 6-inch concrete, spade finished on hardcore, with the exception of 40 feet inside the west end, which is reinforced to carry lorry traffic.

The sliding doors at the west end are a special feature. They have been designed so that any one of the 105-feet spans can be completely opened, and were so arranged that the doors of one span could slide in front of those adjacent.

Heating.—The whole shed is warmed by a system of low pressure hot water, circulating through approximately 7½ miles of piping and radiators, maintaining a temperature of 60° when freezing outside. The amount of water circulating through pipes and radiators being 40,000 to 50,000 gallons an hour, which is accomplished by means of electrically-driven centrifugal pumps of 10 h.p. The hot water is generated by nine large cast-iron sectional boilers in the boiler house adjoining the shed. The coal consumed averaging about half a ton per hour in coldest weather.

Lighting.—Lighting is by means of 300 candle-power incandescent electric half-watt lamps suspended from the roof. Current taken from the Electric Supply Co's. main through a transformer on the adjoining premises.

Fire Protection.—The whole of the shed is protected from fire by a system of automatic sprinklers operating on the wet system. There are about 2,500 of these which automatically come into operation on the outbreak of fire, at the same time giving alarm. In addition to the sprinklers, there is a system of fire hydrants inside and outside the building.

The whole of the fire service is supplied with water from the company's main, and there is also a large storage tank of 30,000 gallons capacity specially provided to feed the sprinklers. When the automatic alarm goes off the system can be applied directly to

the 6-inch supply main, which has a pressure of 180 feet head of water.

The total cubic content of the buildings is approximately 8,000,000 feet, and the cost 3·5 pence, or with engineering services, 4·25 pence per cubic foot.

A Flying Boat Shed.—This shed was erected for the assembling of new flying boats, which were being built by a firm at works adjoining the site.

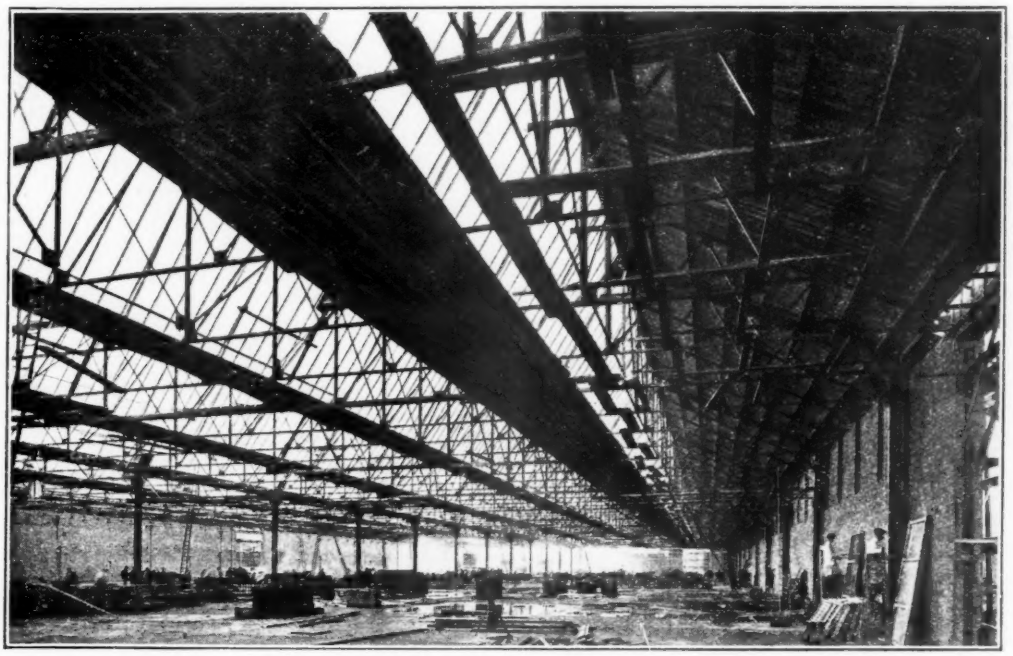
The site comprises a small estate and part of the mudlands adjoining with a water frontage. Access is by water road and rail station about seven miles distant.

The actual position of the shed was decided upon with due regard to the enormous amount of ground work that was necessary. Practically the whole of the site was liable to flooding at high tide, and the floor of the shed had to be kept up at a level to ensure practical immunity at the highest tide.

The buildings consist of flying boat shed, boiler, power and pump houses and lavatory blocks, with a fire service reservoir for emergencies. A large expanse of marshalling platform being provided on the water frontage, and a slipway projecting therefrom into the water for a distance of 500 feet.

The shed is 500 feet long and 153 feet wide, and was constructed entirely of steel, and designed in such a manner that there were only nine internal stanchions, the roof being arranged on the north-light principle, the main spans being 100 and 150 feet respectively. These large spans were necessary to enable the construction of the largest-sized flying boats, leaving a margin for development in the machines of the future.

On the north side sliding doors were provided along the whole length of the shed, twenty in number, each approximately 25 feet wide and 35 feet 6 inches high, and weighing approximately 6 tons. These doors are supported on two ball-bearing wheels, with four guide wheels at the tops running in a top guide. The doors run very smoothly, and, despite the great weight, can be manipulated by one man, being so arranged that a clear opening of about 275 feet can be obtained. On the south side there are four pairs of sliding doors in two sections, of similar type, but smaller in size, being 20 feet by 15 feet, the opening being 30 feet by 20 feet.



The floor space of main shed is 77,250 feet super, and the marshalling platform has an area of approximately 90,000 feet super, that of the slipway being approximately 18,000 feet.

The floor of the shed and marshalling platform was constructed for the major portion of the site on solid filling obtained from the adjoining mudlands, but for a portion of the east end of the shed and marshalling platform piers formed of reinforced concrete tubes filled in with concrete and taken down to ballast, carrying steel girders and a reinforced floor, were used, as the amount of filling would otherwise have been excessive.

The concrete floors throughout the shed and platform (except to east end, where steel-framed floor and filler-joists are used) are reinforced with steel wire

mesh, and have been designed to carry a cart load of three tons.

The slipway was constructed throughout on piers formed of reinforced concrete tubes, filled in with concrete and taken down to ballast. These tubes are placed at 16 feet centres, and carry transverse girders, upon which are placed longitudinal girders running the whole length of the slipway. The floor of the slipway was formed with reinforced concrete blocks, the end being let into the flanges of longitudinal girders; these blocks are laid herringbonewise, and are spaced with a clearance of ½ inch between each pair of blocks. The slipway is laid to a gradual slope, the last 20 feet dipping at a slightly steeper incline, to facilitate the launching of boats at low tide.

Elm fenders were bolted to the sides of the outside joists for the whole length of the slipway.

The boiler house motor and pump house are built of stock brick, with concrete floor and roof, and the chimney shaft is of brick. The power house was built as an extension of the existing power house belonging to the firm whose premises are adjacent, and is of similar construction, with steel roof trusses and corrugated-iron roofing.

Lavatory accommodation was provided for 700 men and 500 women, the sewage being collected in a sewage tank adjoining the land block, and the effluent carried away in pipes slung under the slipway, discharging into the water. Provision has been made for pumping and carting away sewage.

The pump house for fire services is situated next the tidal basin, and is of brick construction. A fire service reservoir with a capacity of approximately 59,000 gallons for the impounding of tidal water is also provided.

The walls are constructed of concrete slabs filled in solid with concrete, the piers in the reservoir being reinforced concrete tubes filled in solid with concrete. These piers carry the steel-girder framing supporting the reinforced concrete roof.

The reservoir is open from a height of 5 feet 6 inches along the whole front to the water, and can be filled at each tide, and emptied by means of a Penstock valve for cleaning purposes.

(*To be continued.*)

The Central Consultative Board: Housing in the London Area.

The Central Consultative Board, the functions of which are explained in the President's letter on page 241 of this number, has held several meetings, and the formation of the Register of architects is actively proceeding. A number of local authorities have accepted the Board's offer to nominate architects for employment on their housing schemes. The following members have up to the present been nominated by the Board:—

As Consulting Architects.—Mr. C. H. B. Quennell [*F.*], Mr. M. S. Briggs [*F.*], Mr. J. S. Gibson [*F.*], Major Maxwell Ayrton [*A.*], Lieut.-Col. Peter Fry, D.S.O., C.M.G. [*Lic.*].

As Executant Architects.—Lieut.-Col. S. W. Cranfield [*F.*], Mr. R. G. Muir [*A.*], Mr. R. M. Pigott [*A.*], Mr. H. F. Murrell [*A.*], Mr. Anthony Wilson [*Lic.*], Mr. Joseph Hill [*A.*], Mr. A. H. Brownrigg [*A.*], Mr. Horace Cubitt [*A.*], Mr. Basil Sutton [*A.*], Major W. L. Lucas [*F.*], Mr. J. Gordon Allen [*F.*], Mr. F. Winton Newman [*F.*], Mr. F. Chatterton [*F.*], Mr. A. J. Healey [*F.*], Mr. W. E. Watson [*F.*], Mr. J. H. Belfrage [*A.*], Mr. T. Spencer [*A.*], Mr. H. J. Birnstingl [*A.*], Mr. G. Berkeley Wills [*A.*], Mr. J. H. Worthington [*A.*], Mr. W. S. Grice [*A.*], Mr. Leslie Moore [*A.*], Mr. Harold Dicksee [*A.*], Mr. W. Harding Thompson [*A.*], Lieut.-Col. W. G. Newton [*A.*], Mr. George Nott [*A.*], Mr. Leslie Glencross [*A.*], Mr. H. A. Welch [*A.*], Mr. A. G. R. Mackenzie [*A.*], Mr. H. J. Chetwood [*A.*].

All the architects nominated as executants have served in H.M. Forces in the course of the war.

The R.I.B.A. Scale of Fees for Housing.

On the advice of the Board the Council have been in consultation with the Ministry of Health, the Board of Agriculture and Fisheries, and other Departments concerned, on the subject of the scale of fees for housing work. Dr. Addison, the Minister of Health, and Sir James Carmichael, the Director of Housing, have received deputations from the Board, and an agreement has been arrived at under which the special R.I.B.A. scale of fees for housing has been accepted, with some slight modifications, by the Departments concerned. In the next number of the JOURNAL the details of the agreement arrived at will be published in full.

9 CONDUIT STREET, LONDON, W., 23*rd August* 1919.

CHRONICLE.

The Unity of the Profession.

At the first meeting of the new Council the following Resolution was passed by a unanimous vote:—

"The Council of the Royal Institute is determined to make a further effort to unify the architectural profession and is about to consider the best means of attaining this object."

The R.I.B.A. Record of Honour: Sixty-fourth List.

Military Honours.

REAVELL, Lt.-Col. G., T.D. [*F.*]. Awarded the O.B.E. (Military Division).

HALL, Lt.-Col. ALNER W., 28th London Regt. [*A.*]. Awarded the Military Cross.

The Royal Academy Exhibition: Regulations for 1920.

The following letter has been received from the Secretary of the Royal Academy:—

Royal Academy of Arts, Piccadilly, London, W.1.
9th July, 1919.

DEAR SIR,—I am desired by the President and Council to communicate to you for the information of the Royal Institute of British Architects the following Regulations which will come into force for the Exhibitions of 1920 and after:—

"Small photographs of not more than 'half-plate' size and only in connection with working drawings (inset in the frame) are admissible for the Architectural Room.

"Good geometrical drawings of moderate size are desirable.

"Architectural drawings which are the work of an artist other than the designer must have the name of the draughtsman clearly inscribed on the mount, but this name will not be included in the catalogue."

Yours faithfully,
W. R. LAMB, *Secretary.*

The Secretary,
Royal Institute of British Architects,
9 Conduit Street, W.1.

The Godwin Bursary.

The Council have awarded the Godwin Bursary and Wimperis Bequest for 1919 to Mr. H. Austen Hall [*F.*]. Mr. Hall is about to make a tour in the Eastern cities of the United States and will prepare a report on modern stores and shop buildings under the terms of the Bursary.

The National Housing Scheme.

The following letter from the President appeared in *The Times* of the 23rd July:—

THE NEW HOUSES: ENCOURAGEMENT OF GOOD DESIGN.

21*st July*, 1919.

SIR,—To no country in the world has there come so lovely a heritage as that which England possesses in her ancient villages. The treasure lies broad and free to all, the equal delight of rich man and of poor; and it is now in danger of irreparable damage. Local authorities are being urged to increase the housing in their districts, and, careless themselves, sometimes quite ignorant, of the beauty of their inheritance, they too often allow the work to fall into incompetent hands. The charm of a village results from subtle combinations of form and colour, often the work of time; and the risk of its impairment by injudicious changes and additions is increased by the abridged procedure under which schemes may be approved without being first examined by the very competent headquarters staff of the Ministry of Health.

Indifference on the part of housing authorities to æsthetic value not only diminishes the national amenity, but does a double wrong to the State, which has provided work proper for its demobilised architect sons, yet sees them still without employment. I appeal for these young men. No profession has suffered from the war as theirs has done, and hundreds who left their hard-won practices to join the Colours have now returned to find the building industry paralysed and themselves idle. In normal times new opportunities might come to them by way of public competition but this method is inadvisable for housing schemes, since it involves delay and waste of much effort needed for immediate progress. The Central Consultative Board of the Royal Institute has therefore established a register of its qualified members and licentiates, and is prepared not only to nominate architects, but to advise both them and housing authorities who accept the nominations in the preparation and execution of their projects. The policy adopted is to distribute the work widely, so that many may be employed and monotony of design avoided. For every considerable scheme several junior executants (those with war service having priority) are appointed, under the general direction of a senior superintending architect; fees, according to a special reduced scale, being divided by the whole group.

In the design of small houses the felicitous tradition of our English architects is acknowledged by the artists of every country, and their thorough practical training is a national asset which should be fully utilised. We cannot compel the employment of our skilful artists, but it is due to the Government to point out that they encourage it, by allowing their modest fees as part of capital cost. Time is very pressing. The country's need must be met; and if housing authorities delay too long Wessex and the Cotswolds, the Weald and Derbyshire, will be covered with the sealed patterns of soulless officialism.—I am, Sir, your obedient servant,

JOHN W. SIMPSON, *President, R.I.B.A.*

The "Daily Mail" Ideal Home Exhibition.

The *Daily Mail* Ideal Home Exhibition will be held at Olympia from 4th February to 25th February 1920. In consequence of the greatly increased importance of the housing question, the Exhibition has been extended to three weeks instead of the usual two.

Workers' ideal cottages, according to the designs which won the £500 prizes in the recent *Daily Mail* Architects' Competition, will be shown.

Amongst many other features of interest, details of which will be published later, great prominence on this occasion will be given to labour-saving in the home. An important effort is to be made to realise a home in which domestic work is reduced to a minimum. Both the public and architects will be invited to co-operate in this effort at an early date.

For the benefit of housing committees of local authorities, public utility societies, borough engineers, and others concerned in the problem of housing the workers, three books of the best designs entered in the recent *Daily Mail* Ideal (Workers') Homes Architects' Competition will be published on the 25th instant. The books will contain 50 plans for houses suitable for Northern industrial, Midland industrial, and Southern and Midland counties' rural areas respectively. In addition, they will contain the names and addresses of all the architects whose designs attained a sufficient

standard of merit to warrant their inclusion, and also the exact locality for which these "mentioned" architects' plans were suitable. The books will be published at 5s. each nett, and may be obtained from all booksellers, or direct from the Book Publisher, *Daily Mail*, Carmelite House, London, E.C.4; post free, 5s. 6d.

Peace Day Decorations.

At the request of the Council, Prof. A. Beresford Pite [*F.*] prepared the scheme of decoration for the R.I.B.A. premises on Peace Day. In the execution of the work he was assisted by Mr. G. K. Gray, of the League of Arts. An illustration of the scheme appears on the frontispiece of this issue.

The *Architectural Review* for August published the following note on the subject :—

STREET DECORATIONS FOR PEACE.

It is a pity that the outstanding events of the month of July—the Peace celebrations—should have had in them so little of art interest except of negative character. That in the capital of the Empire there was no concerted attempt to measure the magnificence of so great an occasion is a national scandal. It is no consolation to know that what we did was immeasurably inferior to what we could have done if the assistance of architects and other artists had been freely sought. A stately effect was got by very simple means in the Mall, whereby the hand of the artist was surely revealed; but, save for the Cenotaph in Parliament Street, there was almost nothing else that rose a hair's breadth above desolating insignificance. From this dismal category the decorations at the R.I.B.A. must be honourably excepted; but in the very act of compelling our admiration for their neatness and decorum they pained us by their strong contrast with the general welter of paltriness.

The work was carried out under great pressure of time by Messrs. Watts & Co., of 30 Baker Street, W.

University Intelligence.

6th August 1919.

In connection with the Bartlett School of Architecture at University College, London, the following new appointments have been made :—

Mr. Martin Shaw Briggs, F.R.I.B.A., Assistant.
Mr. H. Charlton Bradshaw, A.R.I.B.A., Assistant.
Mr. Ernest P. B. Musman, Assistant in the Evening Classes.

Commercial Building.

The following letter from Mr. Delissa Joseph [*F.*] appeared in the *Daily Telegraph* of 22nd July :—

COMMERCIAL BUILDING.

38 *Coleman Street, E.C.2 :* 17*th July.*

To the Editor of *The Daily Telegraph.*

SIR,—The chief obstacle to the re-establishment of the building industry is obviously the increased cost of building, and it may therefore be worth considering whether and how this cost can be reduced. The principal cause of the increased cost is the price of labour, and the price of labour cannot be expected to fall until the cost of living is reduced. As there appears to be no early prospect of such reduction, and as, even after such reduction, the operatives would still naturally demand a higher rate of wages than before the war, so as to enable them to maintain a higher standard of living, one can hardly look either for an early or an appreciable reduction in the price of labour. The price of labour in the production of a building does not merely affect the cost of placing the materials in position on the site, but affects the cost of production of the various materials long before they reach the site. Therefore, the cost of materials in their relation to the cost of production is not more likely to fall within a reasonable time than is the cost of their erection.

There remain, therefore, only two directions in which economy in building might possibly be secured—(*a*) the break-up of the alleged combinations in the building materials trade, and (*b*) the securing of a greater output by the operatives. With regard to the alleged existence of rings in the building materials trade, regulating both the price and the volume of output, we have the statement of the recent Government inquiry that such rings and such control do exist, and a recommendation that a Commission should be appointed to investigate, and if possible check, these combinations. If such steps should be taken and prove effective, there may be a prospect of some economy under the heading of materials; but this must take time.

With regard to the question of increased output, I submit that this can only be attained by giving the operative a participating interest in the profits of the operation by the way of a bonus supplementing the minimum wage. This would give the worker that sense of personal concern in the work which would be the incentive to a maximum output. The difficulty of applying this remedy, as I understand it, is that some of the trade unions are not in favour of the system, founding their objection on the view that, if a man does more than a certain amount of work in a day, he is depriving other men of work. The overcoming of this objection, if it can be overcome, will also take time. Meanwhile, is building to languish, is enterprise to be strangled, and is employment to be restricted? The answer is—No. The facts must be faced, and the increased cost of building must be accepted as an outcome of the war in the same way as the increased cost of other productions has been so accepted. Upon whom, then, must the burden fall? As in all other instances, it must fall upon the consumer.

In the matter of new buildings, who is the consumer?—the tenant or the occupying owner. These classes must learn to recognise that, if they require accommodation for the housing and the development of their businesses, they must be prepared to pay a rental bearing the same ratio to the increased cost of building as pre-war rentals bore to the pre-war cost of building. The effect may be to reduce their trading profits by the amount of the additional rental, and, to this extent, they will be recognising the now inevitable necessity of permitting the working classes to participate in their profits more largely than hitherto, but only by such a sacrifice can accommodation be secured for new commercial enterprises or for the extension of existing businesses. Unless, therefore, building development is to be checked, new enterprises hindered, and unemployment increased, the consumer—that is, the tenant—must pay the increased cost of housing his trade. A trader, on the other hand, if he is indisposed to bear the full burden of the increased rent and the consequently reduced profits, can pass on a part of the loss to the retail purchaser, as we know is already done in most cases where the cost of production of other articles has increased.

In short, if the vast building industry, with its wide ramifications and its endless opportunities for absorbing employment, is not to be strangled, and if free development is to be assured for those business enterprises upon which the future financial position of the country so largely depends, the situation must be boldly faced upon the lines I have ventured to indicate, and the timid policy of waiting upon circumstances must be immediately abandoned.

Yours faithfully,

DELISSA JOSEPH, F.R.I.B.A.

The London County Council and Architecture.

The following letter from the President of the Royal Academy and the President of the Royal Institute appeared in the *Times* on 29th July :—

L.C.C. SUPERINTENDING ARCHITECT.

28th July.

To the Editor of *The Times.*

SIR,—It is understood that the London County Council propose at their meeting to-morrow to come to a very momentous decision, which must affect the well-being of London for many years to come. They are to be asked to elect a Superintending Architect as successor to Mr. Riley, the present greatly esteemed holder of the office.

The duties of the post require that he should be a man not only thoroughly conversant with the intricate building regulations of London, but, what is far more important, that he should possess wide attainments and an architectural training of the highest order. He should be capable of looking forward to, guiding, and controlling the future development of London; since to him will be entrusted the laying-out of new streets, the improvement of old ones, immense housing schemes, schools, fire stations, and all other building projects of the Council.

We venture to appeal to the Council to satisfy themselves that their choice has fallen on such a man before coming to a final decision. A large number not only of the architectural profession, but also of London lovers, are watching the result with much anxiety. None but the best is worthy of such a post.

ASTON WEBB, President of the Royal Academy; Chairman of the London Society.

JOHN W. SIMPSON, President of the Royal Institute of British Architects.

An Architect General.

On 26th July the King held an Investiture at Buckingham Palace, and on this occasion Major-General Sir Charles Rosenthal [*A.*] was invested as a K.C.B. (Military Div.) and also received the C.M.G. and the D.S.O.

A portrait of Sir Charles Rosenthal appeared in the May number of the JOURNAL.

Special Constabulary Reserve: Appeal to Members of the Royal Institute.

The following letter has been received from Sir E. W. D. Ward, Chief Staff Officer of the Metropolitan Special Constabulary Reserve :—

HEADQUARTERS METROPOLITAN SPECIAL CONSTABULARY.

SCOTLAND HOUSE,
NEW SCOTLAND YARD, S.W.
7th July 1919.

DEAR SIR,—You will have seen from the announcement in the Press that authority has been given for the immediate establishment of a Metropolitan Special Constabulary Reserve on the demobilisation on the 16th inst. of the existing Constabulary Force.

At a very early stage of the war it was determined that no one should enter or remain in the Metropolitan Special Constabulary unless, having regard to his age or medical category, the military authorities considered him better employed with us than elsewhere.

Consequently, in the Special Constabulary Reserve, we shall be extremely short of the very type of man whose services as a Special Constable would be of most use to the community in the event of a grave emergency arising—*i.e.*, men under 50 of suitable physique. As it is only in such an event that the Reserve would be called up at all, it has been decided that steps should be taken at once, before any emergency has arisen to give to the Reserve the necessary leavening of young and active men.

The unrest in the industrial portion of the community is so marked that it is vitally important that there should be a Reserve and organised Force of patriotic citizens ready to assist the Regular Police in the maintenance of law and order. The Metropolitan Special Constabulary Reserve will only be called out for duty when the conditions are so grave that it is necessary in the opinion of the Commissioner of Police to reinforce the Regular Police.

I trust that the members of your Association will volunteer for this duty, which will only be necessary in the event of emergency, and which will not therefore at other times interfere in any way with their business occupations. My appeal is for members under 50 years of age and who are physically fit.

Those who are ready to take up these obligations of citizenship are requested to enrol themselves at the police station nearest to their places of residence.

It is intended that members of business associations or firms shall be enrolled, when their numbers admit, in sections under the command of men from their own offices, selected by themselves.

I attach copies of the Regulations for the Metropolitan Special Constabulary Reserve with Conditions of Service and shall be glad to issue to you as many additional copies as you may require.

I trust that you will grant me your valuable help in my task.

Yours truly,
E. W. D. WARD,
Chief Staff Officer.

The Secretary,
Royal Institute of British Architects,
9, Conduit Street, W.1.

War Memorials Exhibition, October–November, 1919.

The Royal Academy War Memorials Committee is making arrangements for the second section of the Exhibition of War Memorials, to be held at the Royal Academy in October and November, 1919, and to consist of works or designs for works in any class of Art or craft selected by the Committee as suitable examples for the guidance of promoters of war memorials. The Committee

desires to make the exhibition as fully representative as possible of the various forms which memorials may take, and trusts that artists and craftsmen, and also owners of suitable exhibits, will do their utmost to support the scheme by sending works. It is not intended to show works with a view to copying or slavish imitation, but to assist the public in the selection of suitable designs and of qualified artists, and to suggest the different forms available for memorials. A Bureau of Reference will be provided for supplying applicants with information regarding memorials, artists and craftsmen. Works and designs for works suitable for war memorials in sculpture or architecture, crosses, decorative paintings or tablets, brasses, metal-work, screens, stained glass, rolls of honour in vellum, etc., tapestry or embroidery, will be admissible for selection by the Committee. Each work or design must be accompanied by the name of the designer and of the executant artist. Special committees will be appointed by the Royal Academy Committee for selecting the exhibits from the works sent in. Schemes which are wholly or largely utilitarian do not come within the scope of the exhibition. The Committee reserves the right of excluding any work which may be considered unsuitable for exhibition. All communications should be addressed to the Secretary, Royal Academy, Piccadilly, W.1, and intending exhibitors will be sent forms and labels on application. It is hoped that the exhibition may be open towards the middle of October. Each application for forms and labels should enclose a stamped and addressed envelope and should be sent in during August. Applicants should state the number of labels required. Works must be sent in on either Monday, 22nd September, or Tuesday, 23rd September, between 8 a.m. and 8 p.m.

Appointments.

The following appointments have been made by the President since the last issue of the JOURNAL :—

Arbitrators.—Major Harry Barnes, M.P. [*F.*].

Assessors.—Mr. H. W. Wills [*F.*], Gravesend Housing Competition ; Mr. M. E. Webb [*F.*], Southport Secondary School Competition ; Mr. Sydney D. Kitson [*F.*], Baildon U.D.C. Housing Competition.

The Building Industries Consultative Board.

The formation of this Board was described in the June number of the R.I.B.A. JOURNAL. The Board, which is now fully constituted, has held a number of meetings. Its proceedings have hitherto been, of necessity, of a confidential nature. They have been concerned mainly with the problems of building labour and the supply of building materials.

In response to a request for detailed information as to the procedure of the Munitions Ministry with regard to the purchase and distribution of building materials, Mr. Kellaway consented to receive a deputation of the Board at Armament Buildings on Thursday, 17th inst.

The deputation, which was introduced by the President of the Royal Institute, Mr. John W. Simpson, consisted of Major H. Barnes, M.P., the President of the National Federation of Building Trade Operatives, Mr. J. P. Lloyd (Vice-Chairman of the Board), and the Secretary, Mr. J. Murrey ; the President of the National Federation of Building Trade Employers, Mr. F. L. Dove, L.C.C., and Mr. E. J. Hill ; Mr. F. H. Hardcastle, F.S.I., and Mr. R. B. Mann, F.S.I., of the Surveyors' Institution ; and Mr. Ian MacAlister, Secretary of the Royal Institute. The deputation was accompanied by Major Prescott, M.P., and Mr. J. R. Remer, M.P.

In reply to the deputation, Mr. W. J. U. Woolcock, M.P., representing the Minister, who was obliged to leave on account of urgent Parliamentary duties, expressed his satisfaction with the action of the Royal Institute in uniting the administrative and executive sections of the building industry in a common effort to restore trade activity. He considered that the Board which had been formed might prove a valuable factor in improving the resources and credit of the country, and willingly undertook not only to furnish the members with all the information they required, but to place at their disposal the facts and figures relating to the purchase and supply of materials which have been compiled by the Department.

The deputation expressed their satisfaction with the attitude of the Minister and their grateful appreciation of his offer to supply the information they desired.

Mr. J. E. Drower, the Director of Building Material Supply, has attended a meeting of the Board and has given a large amount of valuable and detailed information on the subject of the building materials now available for housing schemes and for general building work.

OBITUARY.

Death of Sir Edward Poynter.

We have to announce with deep regret the death of our late Honorary Fellow, Sir Edward John Poynter, Bart., G.C.V.O., Past President of the Royal Academy.

The funeral took place on 30th July in St. Paul's Cathedral. The Royal Institute was represented by the President and a number of members of the Council.

We have also to record with great regret the death of the following Members :—

Frederic Hammond [*F.*].

Lister Coates [*A.*], of Halifax.

Abraham Sharp [*Lic.*], of Bradford.

Mr. Frederic Hammond was articled to the late Edmond Woodthorpe [*F.*] and was a Student and Silver Medallist of the Royal Academy. He entered into partnership with Mr. Woodthorpe and on his death carried on the practice in the City. During his practice he was Surveyor to the parish of St. Giles, Without Cripplegate, Surveyor to the Joint Gift Societies of St. Giles, Cripplegate, and St. Luke's, Middlesex, and Surveyor to the Trustees of the Lady Holles Charity.

Among his executed works were the following : Extensive restorations to St. Giles's Church, Cripplegate ; built St. Andrew's Church, Highgate ; built

Vicarages at Little Warley and Audley End, Essex; built extensive works for manufacture and storage of gunpowder at Chilworth (Surrey), Fernilee (Derbyshire), Barking (Essex), and Pirbright (Hants); rebuilt Infirmary and Casual Wards at Thavies Inn, Holborn, and very extensive works at Bow Infirmary and Homerton Workhouse; joint architect for Bleyton's Dwellings, Hoxton, and Industrial Dwellings, Walworth (both over £50,000); joint architect for Cripplegate Institute, City; built many warehouses and dwelling-houses.

For 38 years Mr. Hammond was a District Surveyor, first of North Islington, to which was added North St. Pancras and the attached portion of Muswell Hill, and then for over 20 years of Hampstead. He was a Fellow of the Royal Astronomical Society, a life member of the British Fire Prevention Committee, and on the executive for many years.

COMPETITIONS.

Bootle Housing Competition.

The Council have directed that the following Resolution should be published in the JOURNAL:—

"Members and Licentiates of the Royal Institute must not take part in the Bootle Housing Competition because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions."

Cosford Rural District Council Competition.

The Competitions Committee of the Royal Institute of British Architects requests Members and Licentiates to refrain from taking part in the above competition, the conditions not being in conformity with the Institute Regulations for Architectural Competitions. The Committee is in communication with the promoters of the competition with a view to the amendment of the conditions.

THE EXAMINATIONS.

The Intermediate Examination.

The Intermediate Examination qualifying for registration as Student R.I.B.A. was held in London from the 13th to 20th June. Four candidates presented themselves, of whom three passed and one was relegated.

The successful candidates are as follows:—

FELTHAM: Stanley Crathern [*P.* 1918], 126 Broadwater Road, Tottenham, N.17.

CROOK: Waldo Neville Harris [*P.* 1913], 6 Davenant Road, Oxford.

SUGDEN: Howard Davy [*P.* 1914], 51 Broomfield Road, Heaton Moor, Manchester.

The Final and Special Examinations.

The Final and Special Examinations were held in London from the 26th June to the 4th July. Of the 18 candidates admitted 9 passed and 9 were relegated. The successful candidates are as follows:—

DAVIES: David Harris [*S.* 1915], 138 Goddard Avenue, Swindon.

FORD: Thomas Francis [*S.* 1915], 36 Hanover Park, Peckham, S.E.15.

FRATER: Robert [*S.* 1913], 7 Bank Street, Greenock, N.B.

GENTRY: Edgar Charles [*S.* 1918], 8 Plympton Road, Brondesbury, N.W.

HOLBROW: Alfred Ernest [*Special*], 13 Cowper Road, Hanwell, W.7.

JACKMAN: Frederick [*S.* 1910], "Woodcote," Imber Park Road, Esher, Surrey.

McMICHAEL: Alastair Marshall [*S.* 1917], Commercial Bank House, Callander, Perthshire.

SOUZA: Walter Edward de [*S.* 1916], 20 Woodville Road, Golder's Green, N.W.4.

WOODHOUSE: Francis Percy Mark [*S.* 1917], Sontismead, Wimbledon Park, S.W.

Austrian Architects and the Terms of Peace.

The following correspondence has been exchanged between the President of the Royal Institute of British Architects and the President of the Society of Engineers and Architects of Vienna. The Foreign Office have expressed their approval of the reply sent to Vienna.

SOCIETY OF ENGINEERS AND ARCHITECTS IN VIENNA.
Vienna, 15th July 1919.

HONOURABLE PRESIDENT,—By this means we have the honour to present you a resolution, resolved the 30th June of the present year by the members of our Society in the Extraordinary Meeting; in this meeting it was considered from a technical and technical-economical point of view the conditions of Peace, being imposed by the allied powers on German-Austria—our present exclusive possession and sphere of activity.

In sending our resolution to all that much esteemed associations of foreign countries, with which we were associated by the scientific endeavours before being War, we beg you, in remembrance of this relationship, to assist us in obtaining an attention for the desires, expressed in our resolution, by the high Governments of their countries.

We remain, with great respect and esteem,
Your humble colleagues,
THE PRESIDENT OF THE SOCIETY.

The President,
The Royal Institute of British Architects,
London.

RESOLUTION.

The Society of Engineers and Architects in Vienna, being the greatest union of men of the technical sciences in the German-Austrian Republic, is deeply excited by the contents of the treaty of peace, dressed in St. Germain en Laye.

She got the irrefragable conviction, that owing to the terms of this treaty the working power of the German-Austrian people will be entirely paralysed, for by the separation of vast and fertile parts of German territories from our country it will scarcely be possible to nourish our people sufficiently and by the intended terrible abatement of the national wealth and of territories possessing important raw materials like coal, wood and numerous water powers the occasion for working will be a lasting trouble for our people.

The bodily strength alone left to us, would never be enough to procure from abroad the wanting provisions and raw materials in a sufficient degree.

The Society of Engineers and Architects in Vienna is also of the opinion that the capacity of commerce and the right of commercial intercourse of our State will be damaged in a terrible way by the terms of peace regarding the harbours, the water communication and the railway traffic.

From the point of view of our vital interests are in particular impracticable and therefore inacceptable: The demand of illimited parity and highest favour to be granted to the allied and associated powers in using the Austrian communications without reciprocity for German-Austria, then the conditions provided in favour to the Tschechoslovakien State for making use of a railway-line, traversing the territory of German-Austria and finally the restriction of the German-Austrian navigation on the Danube and the seizure of the greatest part of the German-Austrian ships.

A State, that is obliged to accept such terms of peace, is incapable of existing. German-Austria would be obliged to sink down from her high degree of culture, high even in comparison to many of its neighbours, and to perish.

The necessity of maintaining the culture in our countries makes it a duty to the Western Powers, after having heard our deputies, to examine profoundly the terms of peace and to soften them to the largest possible extent.

In the name of the technical Science and the technical Labour of German-Austria, represented by our Society, we beg you not to refuse our request.

The President of the Society of Engineers and Architects in Vienna.

8th August 1919.

SIR,—I have the honour to acknowledge the receipt of your letter, dated 15th July, together with a copy of the Resolution passed by the Society of Engineers and Architects in Vienna.

While sensible of the just severity of the conditions in the Treaty of Peace to which the Resolution refers, the Royal Institute of British Architects would attach greater weight to their appeal had your Society taken any steps during the War to prevent, or to publicly protest against, the infamous destruction by their country's allies of those works of architecture whose immense value to the world your Society was very competent to appreciate.

Nevertheless, the Royal Institute ventures to hope that the terms imposed upon your country may prove less disastrous than the Resolution suggests; and, that after the Treaty has been signed, they may be able to resume relations with your Society in mutual effort to advance the Art of Architecture.

I have the honour to be, Sir,
Your very obedient Servant,
JOHN W. SIMPSON,
President of the Royal Institute of British Architects.

The Devastated Area in France and Belgium.

The French Red Cross organisation is anxious to bring home to the British public at large the real state of affairs in the devastated area of Northern France and Belgium. With this object in view it is arranging a series of personally conducted tours through the region, in which a number of representative men will be the guests of the French Red Cross.

The Royal Institute of British Architects has been approached, and it has been arranged that the President, Mr. John W. Simpson, and Sir Banister Fletcher, Sheriff of London, and members of the R.I.B.A. Council, will start on a tour leaving London on September 4th.

Architects and the Royal Engineers.

The following report will be of interest to many members of the Royal Institute who served in the Royal Engineers during the war.

Proceedings of Meeting of the R.E. Corps Committee held in Room 230, War Office, 21st July 1919 (in accordance with the resolution agreed to at the Annual Corps Meeting on 14th June 1919.)

Present.

Maj.-Gen. Sir P. G. Twining, D.F.W.
*Maj.-Gen. S. H. Powell, C.E. Forces in Great Britain.
*Maj.-Gen. L. Jones, C.E. Eastern Command.
Brig.-Gen. T. A. H. Bigge, A.A.G., R.E.
*Brig.-Gen. A. L. Schreiber, C.S.M.E.
*Brig.-Gen. G. S. Cartwright, C.E. Aldershot.
Brig.-Gen. A. W. Roper, I.R.E.
*Brig.-Gen. G. Walker, C.E. London.
Major L. Chenevix Trench, Hon. Sec. R.E. Committee.

*Specially attended with power to vote, in accordance with resolution dated 3rd July 1919.

AGENDA.

To discuss Maj.-Gen. Sir P. G. Twining's proposal:—

"That in the opinion of this Committee it is not only desirable but is necessary that all possible steps be taken towards preserving the feeling of friendship and *cameraderie* which existed during the war between the Regular Corps of R.E. and the Special Reserve, Territorial and Temporary Officers and men, and that as a means to this end the R.E. Institute, and as far as possible other Corps Institutions, should be thrown open to these officers, and that steps be taken to bring this as far as possible to the notice of all such officers."

ACTA.

The opinions of the Presidents of the several R.E. Corps Institutions were read, and following conclusions reached:

R.E. Band Fund and *R.E. Widows' Society.*—The deed of settlement in the one case and Army Orders in the other preclude the possibility of an extended membership.

R.E. Institute.—Already accepts *all* R.E. Officers (including S.R., T.F., and T.C.).

R.E. Charitable Fund.—Already accepts all R.E., including S.R., T.F., and New Armies.

R.E. Games' Fund.—Terms of admission to be considered by Games' Committee.

R.E. Entertainment Fund, R.E. Dinner Club, and *R.E. Luncheon Club.*—Officers of the T.F. and S.R. and Temporary Officers will be welcomed at the Annual Dinner and the Annual Evening Entertainment, and the Luncheon Club tent will be open to them.

R.E. Old Comrades' Association.—Already open to *all* Members of Corps of R.E., including S.R., T.F., and New Armies.

It was further agreed that the above should be advertised in the *R.E. Journal,* and that the Engineering Institutions—*i.e.*, Institution of Civil Engineers, Institution of Mechanical Engineers, Institution of Electrical Engineers, Surveyors' Institute, and Association of British Architects—should be informed early, through the medium of their Secretaries, of the decisions taken, and should be asked, as far as lies in their power, to disseminate this information among their members. Also that special pains be taken to notify existing Territorial Associations for the information of the R.E. (T.F.) administered by them of these decisions. Also a note of the decisions should be sent to Chief Engineer Forces in Great Britain and to Chief Engineers of Commands, who should be asked to disseminate the informations as soon and as widely as possible, and furthermore the Headquarters of the Royal Monmouth and Royal

Anglesey R.E. (S.R.), as also of the R.E. (S.R.) Signal and Postal Section, should be similarly informed.

NATIONAL HOUSING.

Expenditure of Local Authorities in Connection with the Preparation and Execution of Housing Schemes by Their Own Staff.

The Minister of Health has had under consideration questions which have been raised in regard to the amount to be charged to capital account and the payments to be made for professional work in cases where State-aided housing schemes are prepared and carried out wholly or in part by salaried officers employed by local authorities. It is assumed that in such cases the local authorities will utilise the assistance of properly qualified architects in designing the houses and that the engineering and surveying work involved will be undertaken by members of the respective professions concerned.

On this assumption, the Minister has decided that the following arrangements shall apply :—

Payments to architectural, surveying, or engineering staff temporarily engaged in a whole-time capacity exclusively for the housing scheme shall be chargeable to capital account and rank for financial assistance.

Where permanent salaried officers of the local authority are employed on the work, a charge for remuneration for additional work in respect of the scheme may be made to capital account and rank for financial assistance. The amount so charged to capital account may include personal allowances to the permanent salaried officers for any extra work involved, provided that such allowances do not exceed one-third of the officer's normal salary in any one year, and do not continue for more than three years from this date unless, in the opinion of the Minister, there are special circumstances which justify an extension of the period.

The total amount to be charged to capital account where the work is done by the staff of the local authority, whether temporarily or permanently employed, shall not in any case exceed the following scales :—

I.—Preparation of Lay-out Plans.

(This work shall include survey, contours, design of roads, and the disposition of houses and other buildings on the site.)

Area of site in acres.	Number of houses.	Amount chargeable to capital account per house.	Total amount chargeable to capital account.
		s. d.	£ *s. d.*
5	50	5 0	12 10 0
10	100	3 9	16 5 0
25	250	3 0	37 10 0
50	500	2 6	62 10 0
100	1,000	2 0	100 0 0
250	2,500	2 0	250 0 0

If the site exceeds 250 acres in area the figures in the fourth column above should be proportionately increased.

II.—Roads and Sewers.

(This work shall include detail plans, longitudinal and cross sections, quantities, specifications, supervision, and all work required to complete the work in its entirety, except the duties of clerk of works.)

Area of site in acres.	Number of houses.	Amount chargeable to capital account per house.	Total amount chargeable to capital account.
		s. d.	£ *s. d.*
5	50	15 0	37 10 0
10	100	12 6	62 10 0
25	250	10 0	125 0 0
50	500	8 9	218 15 0
100	1,000	7 6	375 0 0
250	2,500	7 6	937 10 0

If the site exceeds 250 acres in area the figures in the fourth column above should be proportionately increased.

III.—Houses.

(This work shall include design, details, supervision, and all work required to complete the work in its entirety, except the duties of clerk of works.)

$2\frac{1}{2}$ per cent. upon the first £7,200.
$1\frac{1}{4}$,, ,, next £35,000.
$\frac{3}{4}$,, ,, remainder.

Suitable modification of this scale shall be made for repetition work.

No charge to capital account will be allowed in respect of the preparation of schemes which are not approved by the Ministry of Health.

A separate memorandum will be issued with regard to the scale of fees payable to architects and surveyors in private practice which may rank for financial assistance under the scheme.

A UNION FOR ARCHITECTS' ASSISTANTS.

The following particulars of the newly-formed Union will interest many members of the Royal Institute :—

ARCHITECTS' AND SURVEYORS' ASSISTANTS' PROFESSIONAL UNION.

For Salaried Architects, Surveyors, Quantity Surveyors, Draughtsmen and Technical Assistants.

34 and 35, Bedford Square, London, W.C. 1.

MEMBERS of the METROPOLITAN EXECUTIVE COMMITTEE.

Chairman : R. G. Llewellyn Evans.
Vice-Chairman : P. W. Farmer.
Hon. Secretary : C. McLachlan.
Assist. Secretary : R. A. Duncan.
Hon. Treasurer : W. G. Mitchener.

Members of Committee :

E. A. J. Buxton.
G. F. Fox.
C. A. Geen.
A. J. Hurden.
J. B. Hector.
A. Mather.
A. D. Reid.
F. R. Taylor.
W. E. Tickner.
G. B. Tubbs.

A Note of Warning.

The whole of England and Europe has just ceased being an armed camp, and the great result learned by this country is that "Numbers backed by Unity" are the prime factors in success.

All industries of to-day have realised this, and the worker of modern times is now a power to be seriously reckoned with. It would be superfluous to enter into the merits and demerits of Trades Unionism, but it must obviously occur to all members of the professions that if they want to better their financial position and to secure their just and proper recognition they must no longer remain disunited.

Various attempts at unity, with divers ideals and motives, have been made in the past, and have always failed from differences of opinion and want of support. And even now organisations of various kinds are in being which will ultimately fail through want of an all-embracing programme.

It is of paramount importance, therefore, that all should be warned, if they do not yet realise, that unless a powerful programme is attempted and all differences of opinion are fused into one Common Federation, any hope of successful unity is doomed to failure, and the condition of the professional man will be "in statu quo ante."

With the object of "Each for All and All for Each" the above Union has been formed, and an earnest appeal is now made to all Assistants throughout the United Kingdom to take steps immediately to enrol themselves in its ranks.

History of the Movement.

In 1918 a few members of the Surveyors' profession, by personal effort, formed themselves into a body with the view of establishing some kind of Union. Simultaneously, some members of the Architectural profession banded together with the same object. These two bodies amalgamated, and a general meeting was held in April this year at the Hall of the Art Workers' Guild, Queen Square, London, when the principles and objects were discussed and placed before the public.

A mass meeting was then held under the chairmanship of a Member of Parliament at the Caxton Hall, Westminster, in April, 1919, when a representative Executive Committee was elected and a mandate to proceed with the formation of a Union throughout the country was given.

Classes of Membership.

The Union consists of three classes of members:—

(1) Probationary Members, confined to those under 21 years of age and of less than five years' experience.

(2) Members.

(3) Past and Hon. Members, confined to those who have ceased to be employed members of the profession and to influential sympathisers.

Objects of the Union.

(1) To provide a common organisation for salaried Architects, Surveyors, Quantity Surveyors, Draughtsmen and Technical Assistants, and to protect their individual interests.

(2) To abolish unpaid and underpaid assistance, and to institute a proper system of payment for overtime.

(3) To watch over and secure efficient training of its members.

(4) To assure the direct representation of its members on the Governing Councils of all professional bodies, and to encourage co-operation with them and practising Architects.

(5) To secure "open" references to Assistants.

(6) To form an up-to-date employment bureau.

(7) To provide opportunities for social and professional intercourse.

(8) To assist members, where necessary and possible, in the execution of their private commissions and in commencing practice.

Organisation.

The Union is being organised on the purest democratic and non-political lines, the Committee in every way endeavouring to be expressive of the will of the majority of the members. By means of branches in all the large towns, local corresponding secretaries, and their co-operation in divisional areas, it is hoped that finally everybody will be roped in.

A stride has been made with gratifying results in this direction, and when complete further information will be issued to all members.

The rules and general conditions are being finally considered and will be shortly in the hands of the printers.

Support and Achievements.

Already the Union has secured the promise of Parliamentary support, and the sympathy of well-known Architects, private as well as official.

The Royal Institute of British Architects and the Society of Architects have shown every sympathy with the Assistant by appointing representatives to the Architects' Assistants' Welfare Committee, and we are greatly indebted to the Architectural Association for the most valuable and material assistance they have rendered us.

Propaganda.

Members of the profession are requested, when perusing the professional papers, to watch for any notices or articles written for or on behalf of the Union, to enable them to keep in touch with our progress. At the same time, it should be borne in mind that the best means of advertisement is personal effort, and all members must therefore become propagandists in whatever place they are or might temporarily reside or visit, and never let an opportunity slip by of advertising the necessity of joining the Union.

Progress.

The Committee is extremely gratified that in the space of a few months the Union has made rapid progress, and hopes that with the support which they feel sure will soon be guaranteed by all, they will be in a position to accomplish the whole of their programme.

The Annual Subscription is 10s. (payable, if desired, quarterly); Probationary Members, 2s. 6d. All subscriptions should be forwarded to the Hon. Treasurer:—

Assistants' and Surveyors' Assistants' Professional Union, 34 and 35, Bedford Square, London, W.C.1.

Professional Notices.

Mr. W. H. Atkin Berry [*F.*] has changed his address from 23 Old Broad Street, to 143 Cannon Street, E.C.4.

Mr. Frederick Chatterton [*F.*] has resigned his appointment under the Public Works Department of Egypt, and has accepted the editorship of *Specification*.